

CLAIMS:

1. (currently amended) A reaction-injection-molded galley cart for an aircraft, comprising:

a body configured to move along a passenger aisle of the aircraft, said body having a one-piece plastic shell that forms a first side portion, a second side portion, a top side portion, and a bottom side portion of said body;

wherein said first side portion is spaced apart from said second side portion;

wherein said top side portion extends between said first side portion and said second side portion;

wherein said bottom side portion extends between said first side portion and said second side portion;

wherein said one-piece plastic shell includes at least one layer of a reaction-injection-molded material;

a plurality of fasteners embedded in said at least one layer of a reaction-injection-molded material, wherein said plurality of fasteners is selected from the group consisting of a plurality of castors, a plurality of hinges, and a plurality of detent flanges;

wherein said top side portion of said one-piece plastic shell has a tray member coupled thereto;

wherein at least one pair of panels is a door for selectively providing access to said interior cavity;

wherein said one-piece shell has a plurality of grooves formed therein for receiving and supporting at least one tray within said interior cavity;

said reaction-injection-molded material including an outer foam layer and an inner base layer, wherein said foam layer is coupled to said base layer, such that said one piece plastic shell has substantially high thermal insulation properties and substantially low weight.

2. (withdrawn) The reaction-injection-molded galley cart recited in claim 1 wherein said at least one layer of reaction-injection-molded material has a plurality of fasteners embedded therein.

3. (withdrawn) The reaction-injection-molded galley cart recited in claim 2 wherein said plurality of fasteners is selected from the group consisting of a plurality of castors, a plurality of hinges, and a plurality of detent flanges.

4. (withdrawn) The reaction-injection-molded galley cart recited in claim 2 wherein said plurality of fasteners mounts at least one decorative panel to said body.

5. (cancelled)

6. (withdrawn) The reaction-injection-molded galley cart recited in claim 1 wherein said top side portion of said one-piece plastic shell has a tray member coupled thereto.

7. (original) The reaction-injection-molded galley cart recited in claim 1 wherein said one-piece plastic shell defines an interior cavity and a pair of opposing open ends in communication with said interior cavity, said pair of opposing open ends having a pair of panels coupled thereto.

8. (withdrawn) The reaction-injection-molded galley cart recited in claim 7 wherein at least one said pair of panels is a door for selectively providing access to said interior cavity.

9. (withdrawn) The reaction-injection-molded galley cart recited in claim 1 wherein said one-piece shell construction has a plurality of grooves formed therein for receiving and supporting at least one tray within said interior cavity.

10. (withdrawn) The reaction-injection-molded galley cart recited in claim 9 wherein said plurality of grooves are formed in said first side portion and said second side portion.

11. (currently amended) A reaction-injection-molded galley cart for an aircraft, comprising:

a body configured to move along a passenger aisle of the aircraft, said body having a one-piece plastic shell that forms a first side portion, a second side portion, a top side portion, and a bottom side portion of said body;

wherein said first side portion is spaced apart from said second side portion;

wherein said top side portion extends between said first side portion and said second side portion;

wherein said bottom side portion extends between said first side portion and said second side portion;

wherein said one-piece plastic shell includes at least one layer of a reaction-injection-molded material with a plurality of reinforcement members embedded therein;

a plurality of fasteners embedded in said at least one layer of a reaction-injection-molded material, wherein said plurality of fasteners is selected from the group consisting of a plurality of castors, a plurality of hinges, and a plurality of detent flanges;

wherein said top side portion of said one-piece plastic shell has a tray member coupled thereto;

wherein at least one pair of panels is a door for selectively providing access to said interior cavity;

wherein said one-piece shell has a plurality of grooves formed therein for receiving and supporting at least one tray within said interior cavity;

said reaction-injection-molded material including an outer foam layer and an inner base layer, wherein said foam layer is coupled to said base layer, such that said one piece plastic shell has substantially high thermal insulation properties and substantially low weight.

12. (withdrawn) The reaction-injection-molded galley cart recited in claim 11 wherein said plurality of reinforcement members includes at least one of a plurality of carbon fibers and a plurality of glass fibers.

13. (withdrawn) The reaction-injection-molded galley cart recited in claim 11 wherein said at least one layer of reaction-injection-molded material has a plurality of fasteners embedded therein.

14. (withdrawn) The reaction-injection-molded galley cart recited in claim 13 wherein said plurality of fasteners is selected from the group consisting of a plurality of castors, a plurality of hinges, and a plurality of detent flanges.

15. (withdrawn) The reaction-injection-molded galley cart recited in claim 13 wherein said plurality of fasteners mounts at least one decorative panel to said body.

16. (cancelled)

17. (withdrawn) The reaction-injection-molded galley cart recited in claim 11 wherein said top side portion of said one-piece plastic shell has a tray member coupled thereto.

18. (original) The reaction-injection-molded galley cart recited in claim 11 wherein said one-piece plastic shell defines an interior cavity and a pair of opposing open ends in communication with said interior cavity, said pair of opposing open ends having a pair of panels coupled thereto.

19. (withdrawn) The reaction-injection-molded galley cart recited in claim 18 wherein at least one said pair of panels is a door for selectively providing access to said interior cavity.

20. (withdrawn) The reaction-injection-molded galley cart recited in claim 11 wherein said one-piece shell construction has a plurality of grooves formed therein for receiving and supporting a tray within said interior cavity.

21. (withdrawn) The reaction-injection-molded galley cart recited in claim 20 wherein said plurality of grooves are formed in said first side portion and said second side portion.

22. (withdrawn) The reaction-injection-molded galley cart recited in claim 11 wherein said base layer is generally impermeable to fluids.

23. (withdrawn) A system for manufacturing a reaction-injection-molded galley cart for an aircraft, comprising:

a first mold;

a resin applicator device for applying at least one layer of reactioninjection-molded material to said first mold;

a second mold for clamping to said first mold and forming a one-piece plastic shell;

at least one motor coupled to at least one of said first mold, said resin applicator device, and said second mold;

a controller coupled to said at least one motor for controlling movement of at least one of said first mold, said resin applicator device, and said second mold;

wherein said one-piece plastic shell has a first side portion, a second side portion spaced apart from said first side portion, a top side portion extending between said first side portion and said second side portion, and a bottom side portion extending between said first side portion and said second side portion.

24. (withdrawn) A reaction-injection-molded galley cart for an aircraft manufactured by the process comprising:

rotating a first mold;

applying a base layer to said first mold;

applying a foam layer to said base layer;

embedding at least one reinforcement member in at least one of said base layer and said foam layer;

halting a spin of said first mold;

clamping a second mold to said first mold;

applying pressure to said base layer and said foam layer; and heating said base layer and said foam layer; and

wherein said base layer and said foam layer form a one-piece plastic shell with a first side portion, a second side portion spaced apart from said first side portion, a top side portion extending between said first side portion and said second side portion, and a bottom side portion extending between said first side portion and said second side portion;

wherein at least said foam layer comprises reaction-injection-molded material.

25. (withdrawn) A method for manufacturing a reaction-injection-molded galley cart for an aircraft, comprising:

rotating a first mold;

applying a base layer to said first mold;

applying a foam layer to said base layer;

halting a spin of said first mold;

clamping a second mold to said first mold;

applying pressure to said base layer and said foam layer; and heating said base layer and said foam layer;

wherein said base layer and said foam layer form a one-piece plastic shell with a first side portion, a second side portion spaced apart from said first side portion, a top side portion

extending between said first side portion and said second side portion, and a bottom side portion extending between said first side portion and said second side portion;

wherein said foam layer comprises reaction-injection-molded material.

26. (withdrawn) The method recited in claim 25 further comprising: applying an outer layer to said foam layer.

27. (withdrawn) The method recited in claim 25 further comprising:

securing at least one fastener to at least one of said first mold and said second mold; and
embedding said at least one fastener in at least one of said base layer and said foam layer.

28. (withdrawn) The method recited in claim 25 further comprising:

coupling a tray member to said top side portion of said one-piece plastic shell.

29. (withdrawn) The method recited in claim 25 further comprising:

coupling a pair of panels to a pair of opposing ends of said one-piece plastic shell.

30. (withdrawn) The method recited in claim 29 wherein at least one of said pair of panels is a door for selectively providing access to an interior cavity that is defined by said one-piece plastic shell.

31. (withdrawn) The method recited in claim 25 further comprising:

coupling a plurality of wheels to said bottom side portion of said one-piece plastic shell.

32. (withdrawn) A method for manufacturing a reaction-injection-molded galley cart for an aircraft, comprising:

- rotating a first mold;
 - applying a base layer to said first mold;
 - applying a foam layer to said base layer;
 - embedding a plurality of reinforcement members within at least one of said base layer and said foam layer;
 - halting a spin of said first mold;
 - clamping a second mold to said first mold;
 - applying pressure to said base layer and said foam layer; and
 - heating said base layer and said foam layer; and
 - actuating a computer-controlled mechanism for moving at least one of said first mold, said second mold, and a resin applicator device;
- wherein said base layer and said foam layer form a one-piece plastic shell with a first side portion, a second side portion spaced apart from said first side portion, a top side portion extending between said first side portion and said second side portion, and a bottom side portion extending between said first side portion and said second side portion;
- wherein said foam layer comprises reaction-injection-molded material.

33. (withdrawn) The method recited in claim 32 further comprising: applying an outer layer to said foam layer.

34. (withdrawn) The method recited in claim 32 further comprising:

securing at least one fastener to said first mold; and
embedding said at least one fastener in at least one of said base layer and said foam layer.

35. (withdrawn) The method recited in claim 32 further comprising:

coupling a tray member to said top side portion of said one-piece plastic shell.

36. (withdrawn) The method recited in claim 32 further comprising:

coupling a pair of panels to a pair of opposing ends of said one-piece plastic shell.

37. (withdrawn) The method recited in claim 36 wherein at least one of said pair of panels is a door for selectively providing access to an interior cavity that is defined by said one-piece plastic shell.

38. (withdrawn) The method recited in claim 32 further comprising:

coupling a plurality of wheels to said bottom side portion of said one-piece plastic shell.